And Action! Live in Front of the Camera:
An Evaluation of the Social Live Streaming Service YouNow

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ABSTRACT

The arising knowledge society seems to produce its own digital services. In the last few years, with social live streaming services a new type of synchronous social media emerged. What functions do such services offer? What information need and information behavior do users of this services exhibit? Method: As a heuristic theoretical basis, the Information Service Evaluation (ISE) model was applied to analyze YouNow as a case study of this kind of new social media. The evaluation is based on an online-survey among YouNow's users as well as observations of the live-streams. Results. YouNow is mainly used by adolescents and young adults. For this group, it is important to interact with friends, be a part of the community and find ways of self-expression. This is exactly what YouNow offers its users. Most of them enjoy the functions of the service. The experience of "flow" was sometimes perceived. Possible law infringements (such as copyright and personality rights violations) were detected.

KEYWORDS

INTRODUCTION

In knowledge society, there "has been an extraordinary increase in the information in social circulation" (Webster, 2014, 21). Technology has "enabled the 'knowlededification' of our society (providing information through digital means)" (Carroll, 2014, 12). In fact, "the world has been reinvented, as well as individuals and organization" (Lucas de Azevedo & Borges, 2015, 1). Especially social media play important roles in knowledge societies. Such information services allow users to act both as producers and as consumers ("prosumers"). Prosumers in social media are characterized by shared goals. They form virtual communities (Linde & Stock, 2011, 259 ff.). One kind of social media are social networking services (SNSs), which are platforms for self-presentation and communication with other members of the community (Boyd & Ellison, 2007). Most SNSs are asynchronous (as for instance Facebook) (Khoo, 2014, 81), which means that there is a time lag between sending a post and receiving an answer (a comment, "like," or share). With social live streaming services synchronous SNSs arrived.

Live streaming services emerged during the last few years and became important trough the popularity of YouTube and electronic sports events (e-sports). On social live streaming services, every user has the opportunity to stream one's own live show in real-time. Its viewers are able to interact with the streamers through a chat and can bestow them with virtual rewards. There are general types of live streaming services without any thematic relation just like Twitter's Periscope, Google

Hangouts, IBM's Ustream and YouNow as well as topic-specific live streaming services, e.g. Twitch (video games) and Picarto (art). YouNow is applicable via smartphone as well as via webcam and PC. Every user can broadcast every time at every location.

Our case study of social live streaming services is YouNow. When searching for literature on YouNow, there are only a few results of papers and other studies. A paper about connection times on YouNow (Stohr, Li, Wilk, Santini, & Effelsberg, 2015), an article on technical issues of such services (LeSure, 2015), one about ethical problems (Henning, 2015) and a study on possible law infringements of YouNow users while streaming (Honka, Frommelius, Mehlem, Tolles, & Fietkiewicz, 2015) could be found. According to Fietkiewicz, Lins, Baran and Stock (2016) members of Generation X (born between 1960 and 1980) prefer to use Twitter and Xing, members of Generation Y (born between 1980 and 1996) mostly apply 9gag, Xing, Facebook and YouNow and, finally, Generation Z (born after 1996) mainly use Instagram and YouNow, while all generations work with YouTube. Therefore, our study is the first comprehensive empirical evaluation of the general live streaming platform YouNow.

Along with the Information Service Evaluation (ISE) model (Schuman & Stock, 2014) this study critically evaluates the four facets service, user, acceptance and environment of YouNow. What functions does YouNow offer? Is the service easy applicable? How did the users come across YouNow? Why and how often are they using the service? What information behavior and information need do users exhibit? Would users recommend the service and what could be reasons for opting out? To answer these questions, the researchers have prepared an online survey with YouNow users as participants. For information environment a study of potential law infringements in YouNow streams by Honka et al. (2015) was added to the analysis.

YouNow is operated by YouNow Inc. in New York City since 2011. It offers the opportunity to stream wherever you want to without any time limit. Indeed, the empirical investigation shows that users stream for several days without a single break, even while they are eating, working, or sleeping. Some users apply their mobile devices (e.g., smartphones, tablets) to broadcast from different locations.

THE ONLINE LIVE STREAMING PLATFORM YOUNOW AS A CASE STUDY

"YouNow is the best way to discover talented broadcasters, watch live streams and video chat live with people from around the world" (YouNow, 2016). It was initially meant for YouTubers to get in contact with fans, to chat with them and to answer their questions in real-time. Many teenagers enjoyed the functions of the live streaming service, shared their experiences with friends and started to build their own fan base. According to Adi Sideman, founder and CEO of YouNow, this information service broadcasts about 150,000 unique livestreams daily (2015).

In order to enter YouNow one has to confirm to be 13 years old or older. To create an account, one has to be a Facebook, Twitter, Instagram or Google+ user; there is no option to register by email address. After entering the site a stream will start automatically. If a user wants to start an own stream, he or she can add a hashtag to the broadcast (other users can search for it) and share the stream on other social media platforms. As shown in the screenshot (Figure 1), the live stream is located in the center of the website together with the number of likes and shares, the current streaming time and the number of viewers.

The profile picture, user name, level, and profile description of the streamer are placed above the stream. On the left-hand side of the website you find lists of trending hashtags and trending current streamers. On the right-hand side, there is a chat to interact with the live broadcaster; only users that logged in are allowed to send chat messages. It is also possible to get a list of all the viewers and to be a video guest in a live stream.

The YouNow community bestows gifts through the chat, like stickers, emojis, icons or likes, not only to show their acceptance and interest to the broadcaster, but also to stand out from the crowd. In order to be able to buy a gift, it is necessary to earn "coins," one of the virtual currencies of YouNow. One can collect coins through various site-activities like going online, being live, watching streams

or chatting. Another currency, which has to be bought with real money, is called "bars". Bars enable users to buy premium gifts. Every registered user has a level, which represents the users' experience and status on the website. It increases due to several broadcasting activities, active viewing, sharing or integrating social media accounts. While achieving higher levels, the user will unlock new features and additional advantages on YouNow. At the end of a live stream, a statistic overview of received likes, presents and coins, as well as the number of the total audience and new fans is shown to the user.

According to Alexa (2016), most visitors of the website are from the United States (24.2%), followed by Turkey (11.4%), Mexico (10.1%), Germany (8.6%), and Saudi Arabia (4.9%). The top browsing location for YouNow is (far above the Internet average) from home. The visits to YouNow from school are slightly over the Internet average, whereas visits from work are slightly under the average. Many YouNow users obviously attend school and only few of them have a workplace. According to the survey data the platform is mainly used by teenagers and young adults between 13 to 22 years, with a peak at 16 years old teenagers.

METHODS

The investigation about YouNow is based on the Information Service Evaluation (ISE) model (Schumann & Stock, 2014). It is a comprehensive heuristic model and a theoretical framework for all aspects of the description, analysis and evaluation of all kinds of information services (Stock & Stock, 2013, 481 ff.). The model is divided into 5 different dimensions, namely the information service (dimension 1: quality of service, system, and content), the service's users (dimension 2: information need and information behavior), the acceptance of the service by users and the community (dimension 3: adoption, use, impact on users' information behavior, diffusion into the community, and opting out), the environment of the service (dimension 4: competition, culture, governance, and marketing) and, finally, the development of the service and the community over time (dimension 5). As social

Figure 1. Screenshot of a YouNow live stream. Source: YouNow.com

live streaming services are relatively new social media systems and there is nearly no literature about it, the aspect of time (dimension 5) is not considered in this investigation (Figure 2).

The quality of an information service can be analytically divided into the perceived service quality (the information service quality as a user estimates it) and the „objective" information service quality (as an expert with scientific concepts will describe it). The user-oriented quality estimation can be divided into three dimensions:

- Perceived service quality
- Perceived information system quality (ease of use, usefulness, trust, fun and other factors)
- Perceived content quality

Additionally, the model works with aspects to get an objective impression of the service's quality:

- Efficiency
- Effectiveness
- Functionality
- Degree of gamification
- Usability

A central point for using or non-using an information service is the information need of a person. An individual's information need is the starting point of any information behavior (information

Figure 2. The Information Service Evaluation (ISE) model. Source: Modified from Schumann and Stock (2014)
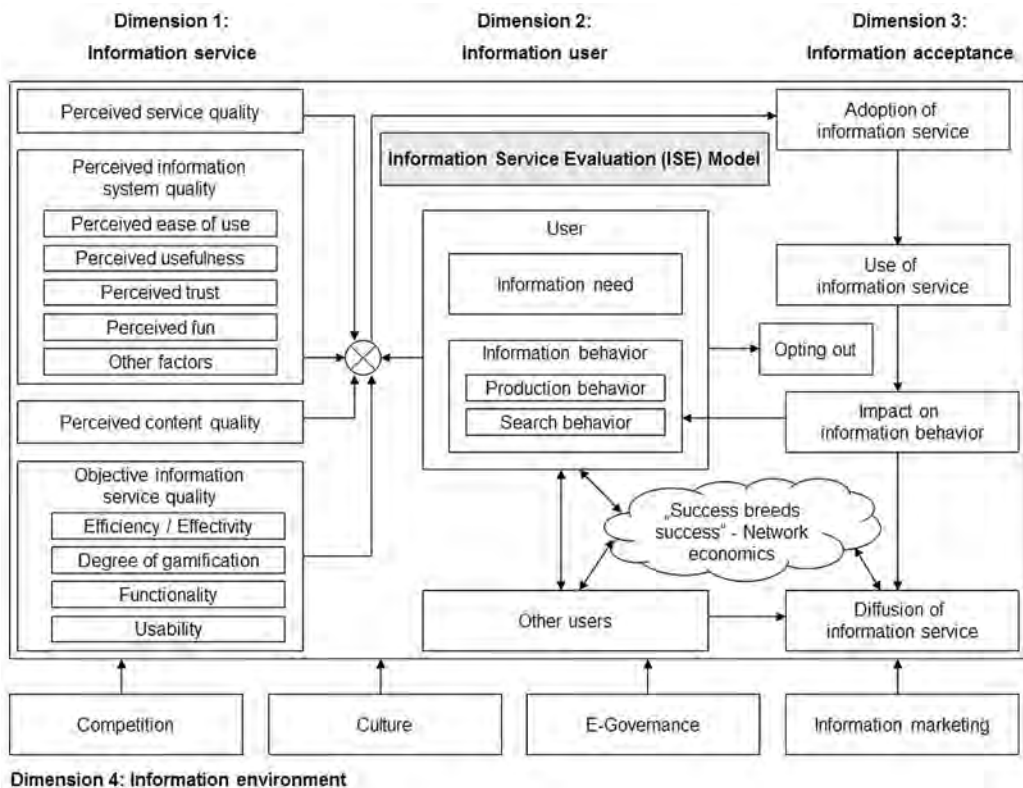
production as well as information search and reception behavior). In his or her information production behavior, the user possibly gets in trouble with the law (e.g., violating copyright law).

If the "right" user meets the "right" information service, she or he will adopt and use it. Adoption does not mean use. One can adopt a service and stop using it. And one can adopt it and use it permanently. You can speak of use, when the user applies some of the information service's functionalities in his or her professional or private life once there is information need on hand. In the case of use, it is possible that the user's information behavior or his or her general behavior will change. This aspect is called impact. Finally, an information service can diffuse into a community, when many people use it and it has an impact on their information behavior. Diffusion is a typical phenomenon of network economics (Linde & Stock, 2011) following the principle of „success breeds success." The more users an information service is able to attract, the more the value of the service will increase. More valuable services will attract further users. If an information service passes the critical mass of users, network effects will start. This leads to positive feedback loops for direct network effects (more users—more valuable service—any more users) and indirect network effects (more complementary products—more valuable service—any more complementary products) and—when indicated—in the end to a standard (Baran, Fietkiewitcz, & Stock, 2015). Diffusion is a social process depending on the extent to which friends, family members, peers, colleagues, club members, etc. influence a user's information behavior. Finally, the aspect of quitting an information service is necessary. Opting-out is motivated by (altered) information behavior of the user and by his or her position in the community.

Information services and information users are embedded in contexts. Important aspects of the information environment are cultural influences, governance and law, the market situation (including competitive services) and marketing for the information services.

The main part of the investigation is based on a survey, which took place from June, 3rd till June, 28th 2015 on Umfrageonline.com. It had 123 YouNow users as participants, who primarily were from Germany and the United States. In the survey the users were asked questions about the information service quality and the information content quality of YouNow, about the information need and information behavior of the users and the acceptance of the service in the community; for instance:

- How did they get to YouNow?
- How often do they use YouNow, how long do they stream and what is the influence of this service on their leisure time?
- Why are they using YouNow?
- Is YouNow easy to use?
- Do they think YouNow is useful?
- Do users have fun using YouNow?
- Do they trust YouNow?
- Which activities on YouNow do they like?
- What streams are they watching?
- How do they prepare for a stream?
- Do they use music, pictures or videos in their streams?
- Do they have experiences with other streaming services?
- Would users recommend YouNow?
- Are there any reasons to quit YouNow?
- Additionally, questions for personal information (demographics) were asked.

For the majority of the questions (e.g., "Why do you use YouNow?") the researchers pre-formulated answers (e.g., "Watching streams," "To stream," "To chat," etc.), and defined a 7-point Likert-scale (from "highly disagree" via "neutral" to "highly agree"). In the analysis, the values were summarized, 1 to 3 as "disagree", 4 as "neutral," and 5 to 7 as "agree." Additionally, open questions

were formulated (e.g., "Besides YouNow, what other live streaming platforms do you use?"). A gap-analysis was included in the survey questions: the users should rate statements for general expectations and the perception on the content of YouNow (Parasuraman, Zeithaml, & Berry, 1988). Furthermore, with the four statements "YouNow is easy to use", "YouNow is useful", "I trust YouNow", and "I have fun using YouNow" the Technology Acceptance Model (TAM) (Davis, 1989), was applied in the survey.

The added empirical study for the aspect of e-governance and law in the dimension 4 (information environment) concerns potential law violations by YouNow users (Honka et al., 2015). The data was obtained through an observation of a significant number of streams, because in another method, for example an online survey, the answers could be easily falsified. On the one hand by the dishonesty of the participants or on the other hand because of the different understandings of which actions are actually legally relevant, the results would possibly be distorted.

The observation of the streams was limited to the ones from Germany and the U.S.A., it took place during June 2015. To get the socio-demographic data the streamers got asked or it was obtained from the streamer's profile. The streams were divided into four groups, where every group was observed for seven days – females from Germany, males from Germany, females from the U.S., and males from the U.S. Each day of the observation has been divided into four parts (12 a.m. - 6 a.m., 6 a.m. - 12 p.m., 12 p.m. - 6 p.m. and 6 p.m. - 12 a.m.).

The streams were studied for legally concerning actions. The points of reference were law infringements frequently observed in social networks (or the Web in general) according to the German law, which is stricter than the U.S. law regarding, for example, copyrights or personal rights. This way the researchers gain a broader range of possible legally concerning actions. Demeanors being in the focus of this observation were: copyright infringements (concerning music pieces protected by intellectual property rights), youth protection (regarding sexual content or underage use of alcohol or drugs), personality rights (right in one's own picture, spoken or written word), and defamation.

The classification of a stream as one with potential law infringements was based on a rough assessment by the observer—is music being played in the background, or, are other people being filmed without their explicit consent?—and did not include a complex legal examination or consideration of exception regulations. Therefore, it is to emphasize that the results include only potential legally relevant actions.

RESULTS

For all empirical data from the online survey, the number of respondents is N = 123. All in all, 60.6% of the survey participants were male and 39.4% were female. According to Alexa (2016), the number of male visitors to YouNow is slightly higher than the Internet average whereas the number of female visitors is slightly under the Internet average. The median age of the participants was 20 years and the most frequent age group were 16-year-olds. When looking at the streaming time the median comes to 60 minutes, but few users even stream for several days. The gap-analysis and TAM were used for the information service evaluation. Furthermore, results from a study on possible law infringements in streams (Honka et al., 2015) were added in the part of information environment.

Information Service

In the survey the users of YouNow were asked what they think about the social live streaming service. An amount of 64.7% is having fun using it. For the majority (82.8%) YouNow is easy to use and only 9.8% think it is not. Even when the service is not useful for 29.5% of the users, more than half (54.1%) of the users agree that the service is useful. When coming to the aspect of trusting YouNow, only 34.5% do and 55.7% do not (Figure 3).

On YouNow are several types of content; therefor our research is focusing not only on the online live-streams, but also the chat-messages and the hashtags. To get a view on the perceived content

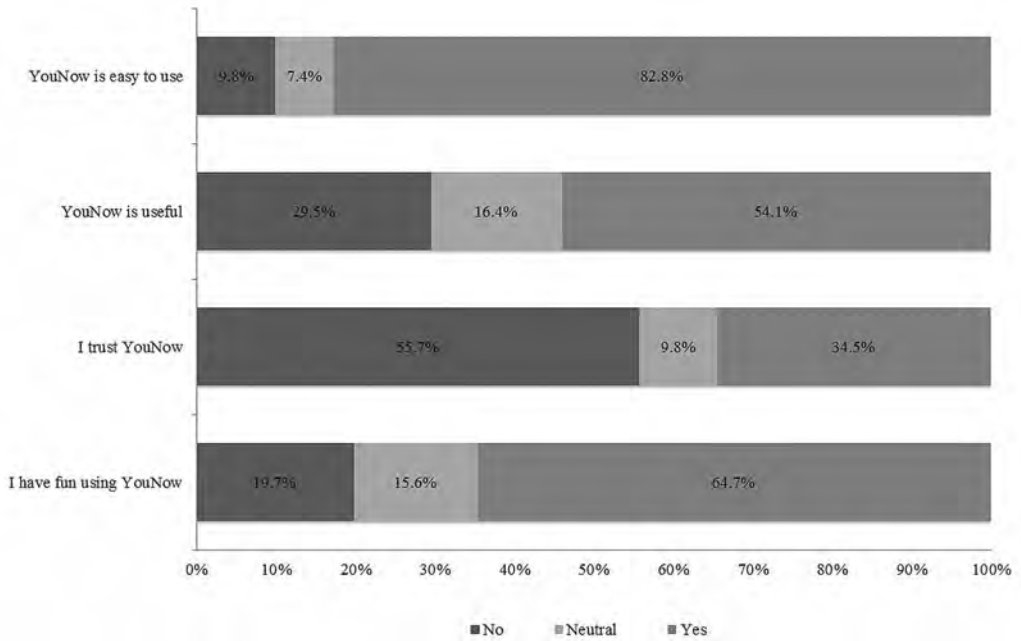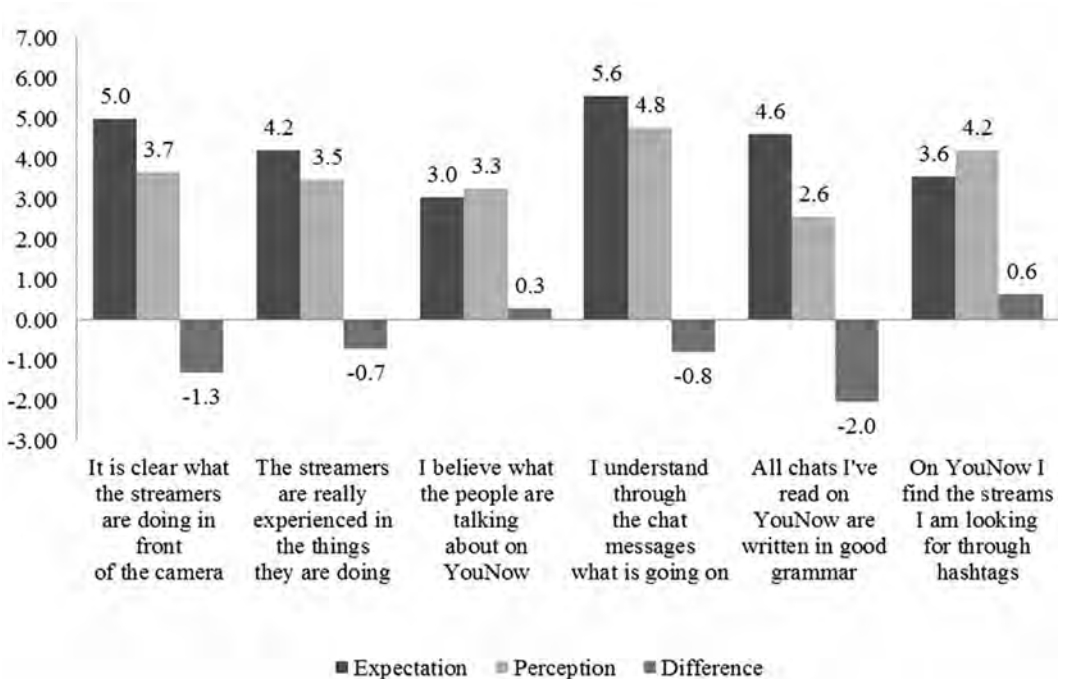**Figure 3. Perceived information system quality of YouNow (N = 122)**

Figure 4. Perceived information content quality on YouNow (N = 110)

quality a gap-analysis was applied in the survey (Figure 4). The expectation on understanding the chat messages is the highest (5.6), followed by the clarity of what the streamers are doing (5.0). The highest perceived content quality is the fact of understanding the chat-messages (4.8) and finding streams through hashtags (4.2). Focusing on the differences between expectation and perception four out of six statements have a negative difference value. The worst is the usage of grammar in chat-messages (-2.0), followed by the understanding of what the streamers are doing in front of the camera (-1.3). The two positive perceived statements are "On YouNow I find the streams I am looking for through hashtags" (+0.6) and "I believe what the people are talking about on YouNow" (+0.2).

All in all, the system of YouNow is easy to use. Hashtags lead to simply finding streams. Users worry about the grammar of the comments and have problems in understanding the streams' contents.

Information User

Most users (48.0%) got to know YouNow from the Internet, especially from other social media platforms. In total, 35.0% came to YouNow because of recommendations of their friends. Only a few users (4.1%) knew it from the television, less (0.8%) from the family, and 12.1% from other sources.

In order to ascertain the information need of YouNow users, the participants were asked for reasons why they use this service (Figure 5). The answers were typical site activities, namely streaming, watching streams, chatting or rewarding. Total 59.5% of the participants use the platform to watch streams. Only 45.0% of the participants apply YouNow to stream their own live broadcasts, and about a half of them (49.2%) would not stream at all. Total 58.4% of the participants like to chat on YouNow, and for 60.6% it is a significant information behavior to reward other users.

Furthermore, the motives for using YouNow are shown in Figure 6. YouNow gives easy access to publish a stream. The main motive to use YouNow is the fact that this system is easily applicable (72.3% agreed this proposition). Next is the satisfaction of the need of self-presentation (64.9%), followed by boredom (56.1%) and the acceptance by the community (52.9%). Around half of the test persons use YouNow because of their need to belong (48.4%) and two-fifth because they are looking for new friends (39.8%). Every fifth of the sample (21.5%) wants to become a celebrity, and 30.0% are motivated by the contacts to their fan base.

As for TV shows the actors get prepared by professional make-up artists and stylists the participants were asked if they prepare themselves for the stream (Figure 7). Checking the camera and the microphone before broadcasting is performed by four-fifths (80.0%) of the streaming users. Some users (63.3%) are informing their friends and fans and share their starting live-stream on other social media platforms. For more than two-fifths (41.7%) of the YouNowers it is important to style themselves before the broadcast. Total 30.0% even prepare topics and some streamers (11.7%), mostly singers and musicians, do vocal exercise.

YouNow is highly gamified and applies features to reward the performers. Gamification means the use of game mechanics in non-game contexts, to motivate users to continue using the system (Zichermann & Cunningham, 2011). Game mechanics consist, e.g., of point systems, levels, virtual goods, leaderboards and gifts. Under certain conditions, the user has the experience of "flow" (Czíkszentmihályi, 1975), which means that one is engrossed with the system and loses awareness of other things (e.g. time). Do such game mechanics indeed motivate users to apply social live streaming services? And have they experiences of flow?

The majority of YouNow users (58.5%) enjoy receiving digital presents; for about a third (34.0%) this is even an important goal to collect all kinds of presents. Moving up in the ranking of the current streamers' playlist is important for 50.0%; and reaching the next level is essential for 38.3% of the sample. For most of the participants, gamification elements like virtual presents or levels are important motivational factors. And, indeed, 58.5% of our respondents had experiences of flow while using YouNow (Figure 8).

There are more users watching streams than producing broadcasts. The users' main motives are self-presentation, boredom and acceptance by the community. The platform is highly gamified,

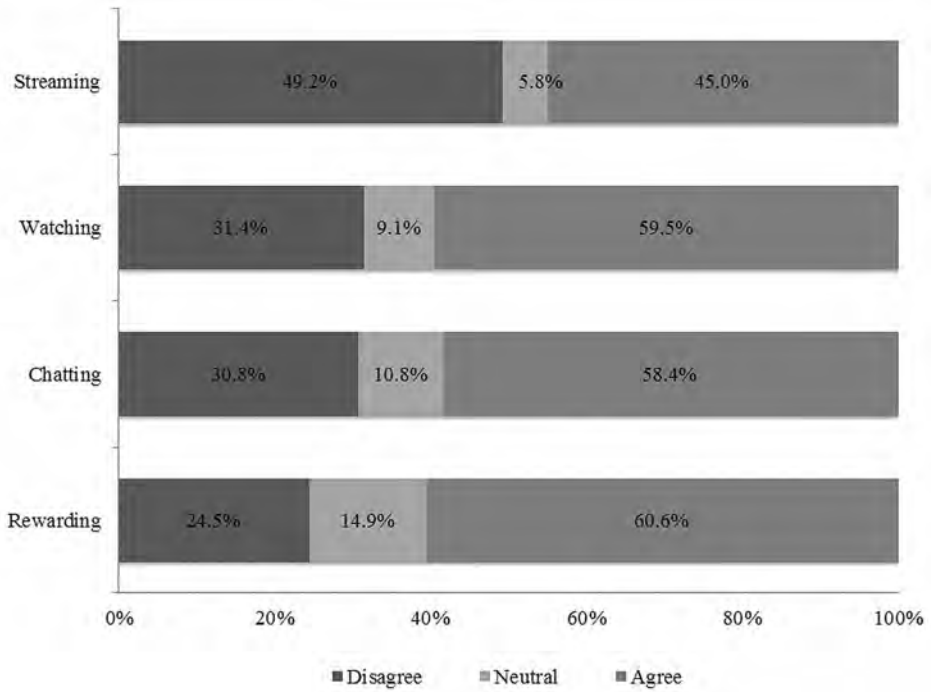**Figure 5. Main information behavior of YouNow users (N = 122)**

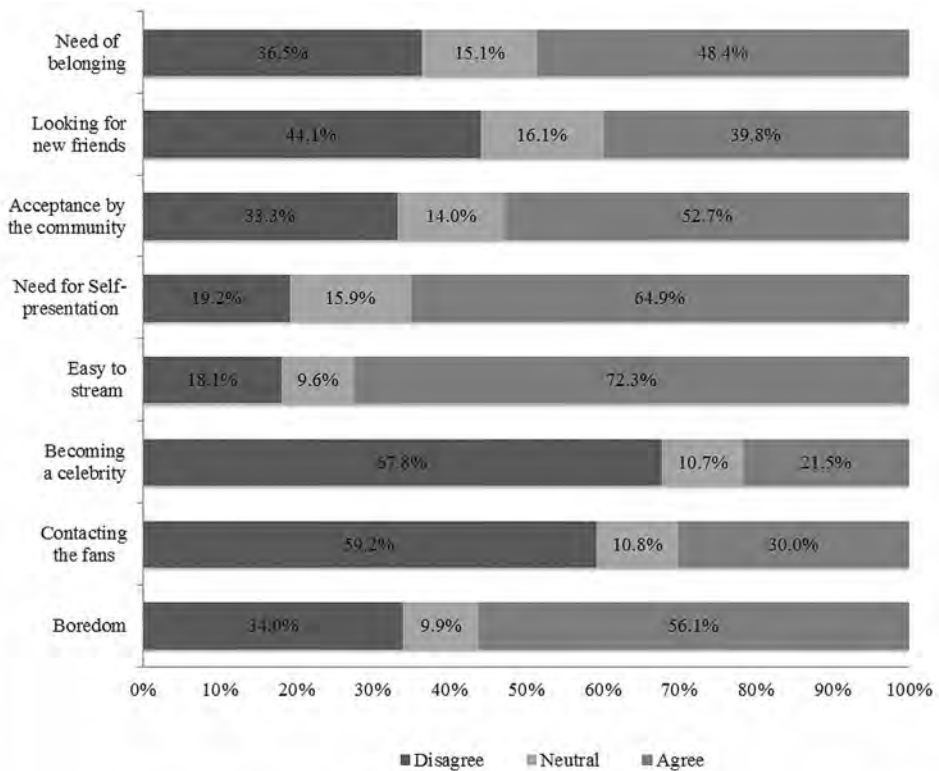**Figure 6. Motives for using YouNow (N = 122)**

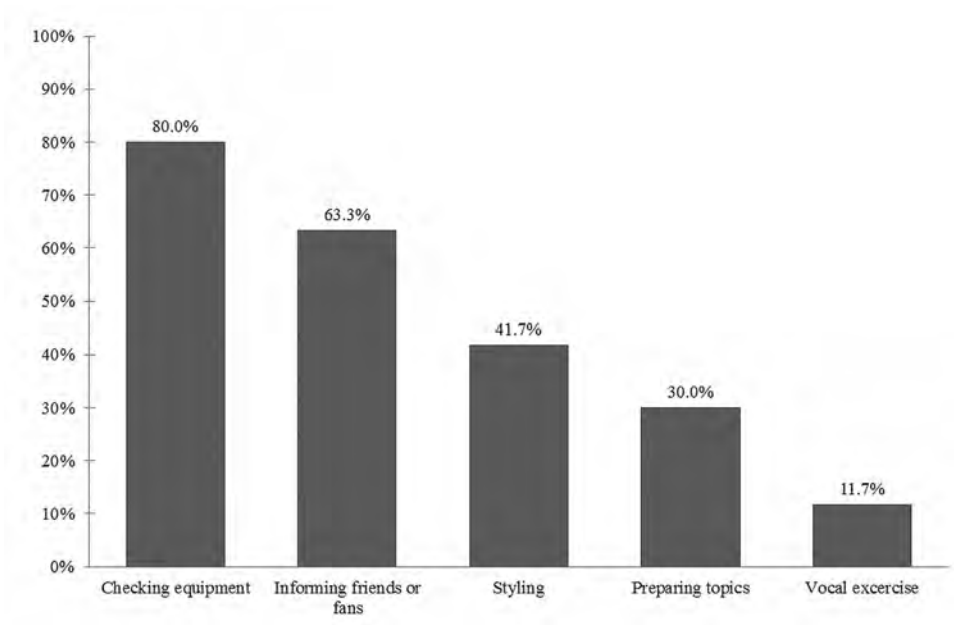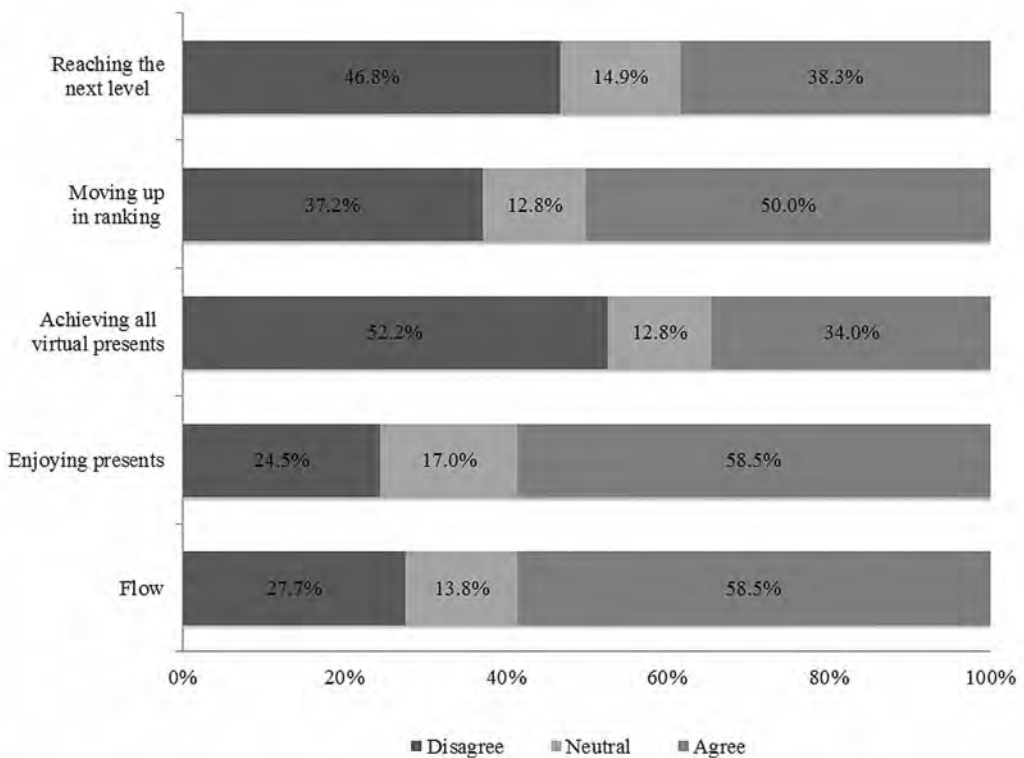Figure 7. Information production behavior on YouNow: Preparations for a live stream (N = 63)

Figure 8. Enjoying, rewards and gamification elements on YouNow (N = 94)

which is broadly accepted by the audience. Users like receiving digital presents or moving up on the ranking lists. Even some users experience flow while they are online on YouNow. Especially YouNow's gamification mechanics and dynamics are distinctive features in relation to its competitors Periscope and Ustream.

Information Acceptance

The participants were asked how often they use YouNow and how they estimate the influence of this service on their leisure time. More than the half (51.6%) disclosed that they were using the live streaming service often, only a few (11.5%) admitted to use it sometimes and more than one-third (36.9%) rarely. Total 41.8% of all respondents confessed that YouNow has a high influence on their leisure time.

Most YouNow users link their profiles with other social media platforms. Over the half of users link their profiles with Facebook or Twitter (55% each). Many users also link to their Instagram account (45.9%) and one-third to their YouTube channel (33.3%), while only two percent links to a Tumblr account and only one percent to a Google+ or Snapchat account (Figure 9).

Figure 10 visualizes the interests of the users and streams they are watching. The answers can be split into four categories: status of the person, similarity, gender, and age. Regarding the first category, the status, 58.2% of the users are watching streams of their friends, and 37.7% (each) are watching YouTubers or new broadcasters. In the similarity category, the most participants are watching streams of people in the same age (34.4%), followed by same interests (33.6%) and same country (30.3%). Only 7.4% is watching broadcasters with the same school degree. If distinguished by gender, the female streamers (39.3%) are watched slightly more often than the male one's (35.2%). To compare the age groups, a total of 42.6% watches streams from users aged 16 to 20, 37.7% from users aged over 20, and 20.5% from users aged 13 to 15.

Concerning diffusion of the service, participants were asked whether they would recommend YouNow to others. Approximately two-thirds (65.6%) would recommend it to friends.

Figure 9. Linking from YouNow to other social media services (N = 111)
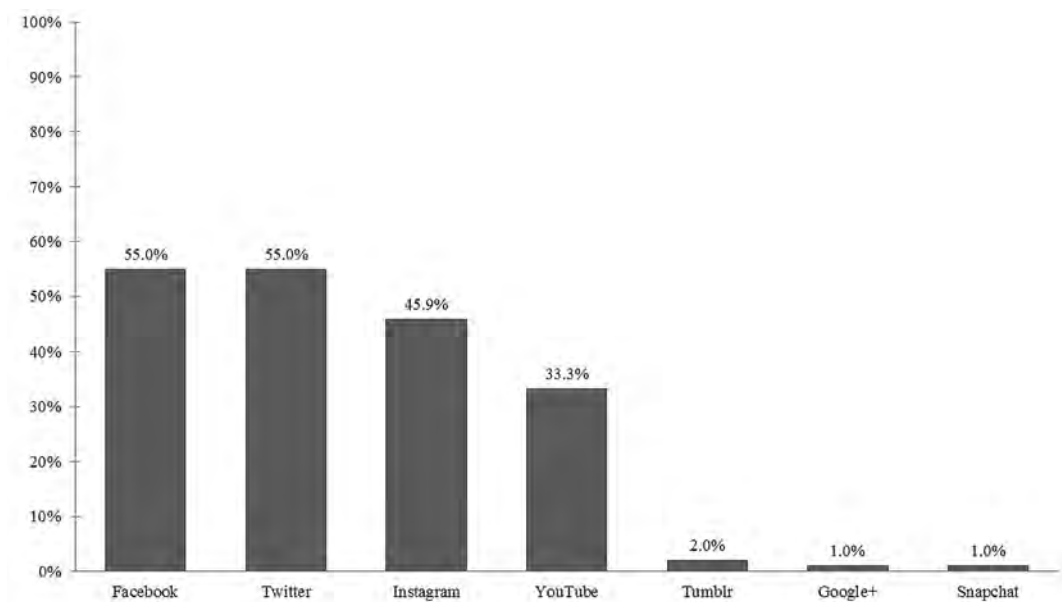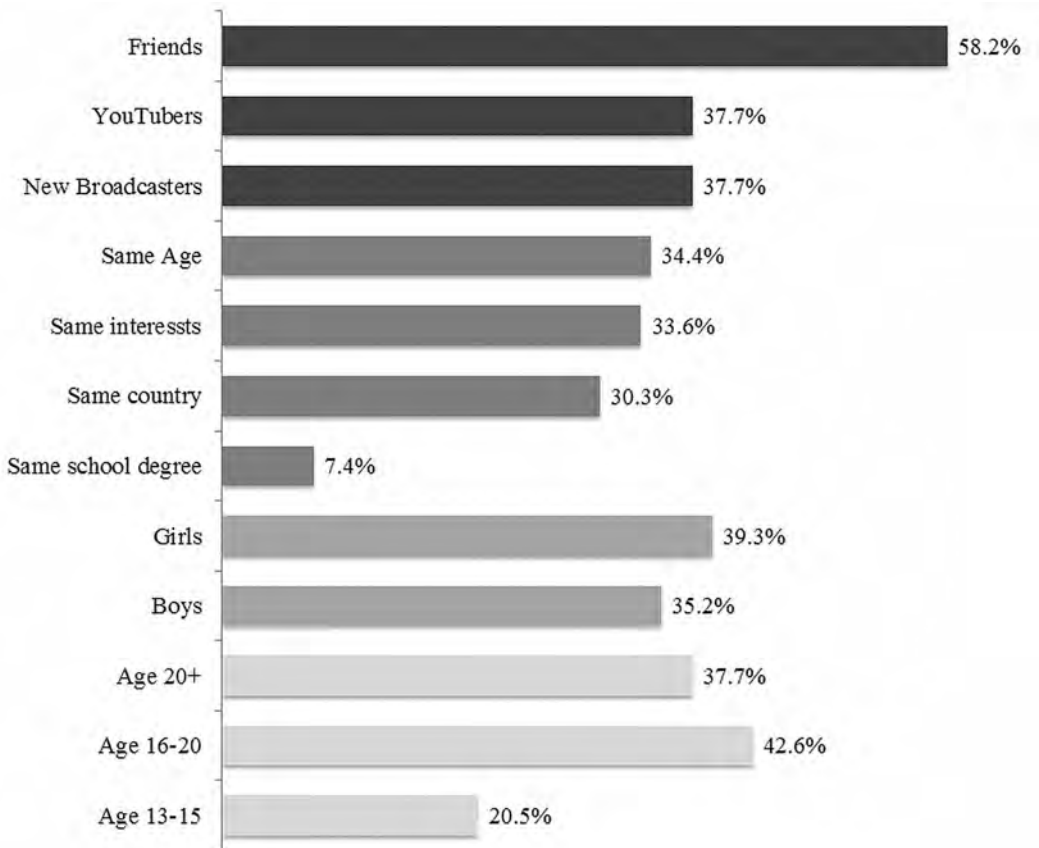
Figure 10. Information reception behavior on YouNow: Preferred streams by status of the person, similarities, gender, and age (N = 122)


The respondents were asked about reasons that would make them quit the platform (Figure 11). About half of the users would quit using YouNow when the usage should get boring (54.8%) or YouNow would abuse their personal data (51.6%). About one-third (35.5%) stated that if they were getting too old for the information service, they would stop using it; more than one quarter (28.8%) said they would quit the service if their friends would stop using it.

The majority of YouNow's users are often online on this platform, resulting in changing leisure behavior. Broadcasters mention their other social media accounts in their profile description. The system is getting great acceptance in terms of high degree of recommendation. One of the main motives to use YouNow is boredom, and when it comes to opting out the main reason is boredom as well.

Information Environment

A view on the aspect of competition is shown by the usage of other online live streaming services beside YouNow. The participants were asked if they have ever used another social live streaming service and if so, which one. About 69% of our respondents are experienced YouTube users. Figure 12 shows that 41.8% of the test persons have experiences with Google Hangouts, followed by Twitch (39.6%). A gap of 25.3 percent points is shown between Twitch and Ustream (14.3%). Only a minority of YouNow users have ever used the services Paltalk (4.4%), Picarto or Periscope (3.3% each). The services TinyChat, Omegle and ChatRoulette are used by only very few people.

Figure 11. Reasons to quit the usage of YouNow / Opting out (N = 122)
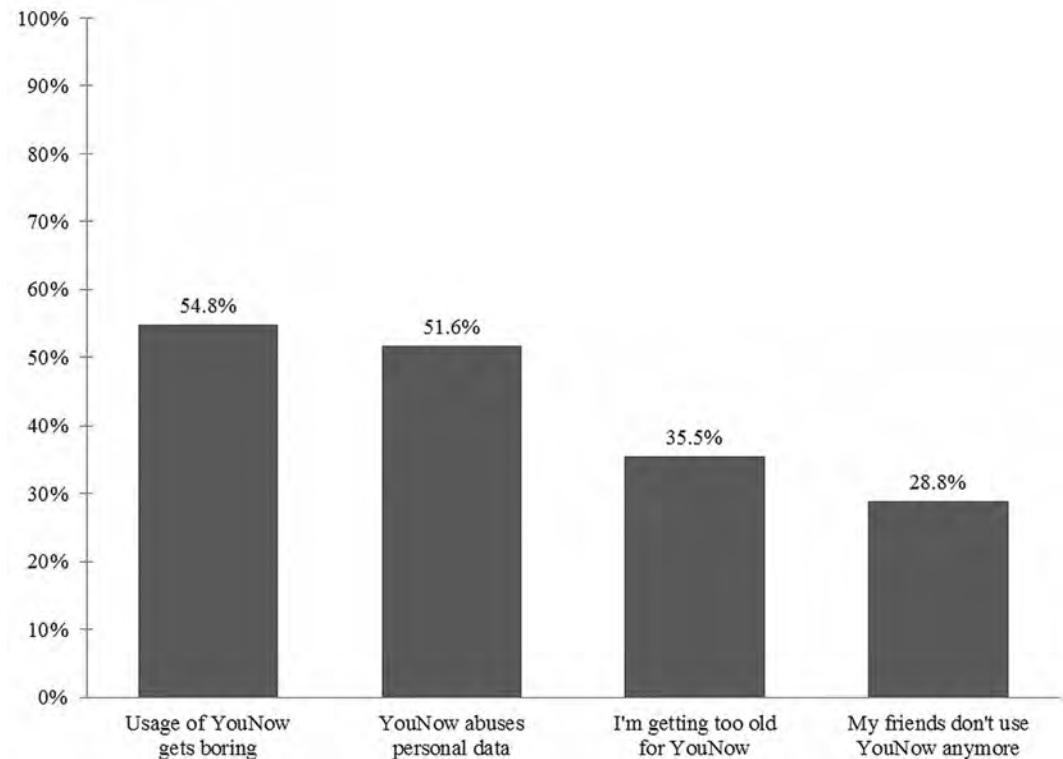
Another part of the information environment is the aspect of law. In the investigation by Honka et al. (2015), concerning potential law infringement while broadcasting on YouNow, an amount of 434 different streams was observed. Total 211 streams were German, whereof 111 were tagged with "deutsch-girl" and 100 with "deutsch-boy," and total 223 were from US-American streamers, 112 tagged with the hashtag "girls" and 111 were tagged with "guys." From all observed streamers, 43% were aged between 13 and 16 years, and 23% were 17 or 18 years old. In more than half (total 248; 57.7%) of the observed streams potential law violations could be detected. Regarding the gender, 143 of the observed female streamers (65.6%) and 112 of the male streamers (50%) took a potential legally concerning action. The major part of this behavior considered possible copyright infringements of music pieces. In total 177 (40.7%) of all observed streamers had music playing in the background during their stream, whereof 92 streamers (52%) were female and 85 (48%) were male.

The differences between German and US-American streamers are shown in Figure 13. Only minor differences could be noticed. Total 58.4% of US-American and 56.9% of German streamers took a potential legally concerning action of the (German) law. In both countries, the most common potential violation was the copyright infringement of music—total 37.0% of German and 44.3% of U.S. streams. The second most observed problematic behavior concerned possible violation of personality rights. The actions chosen for this category were: filming third parties, showing pictures of third parties, reading aloud chat-conversations (or similar) from third parties, or putting phone conversation with third parties on speaker during a stream, all without consent of these parties or even the awareness, their picture or their words are being brought to the public. Here, total 11.9% of German streams and 8.7% of the U.S. streams included potential violations of personality rights. The category of defamation includes insulting remarks made by the streamer or by the audience, and were

Figure 12. Experiences with other streaming platforms and with YouTube (N = 91)
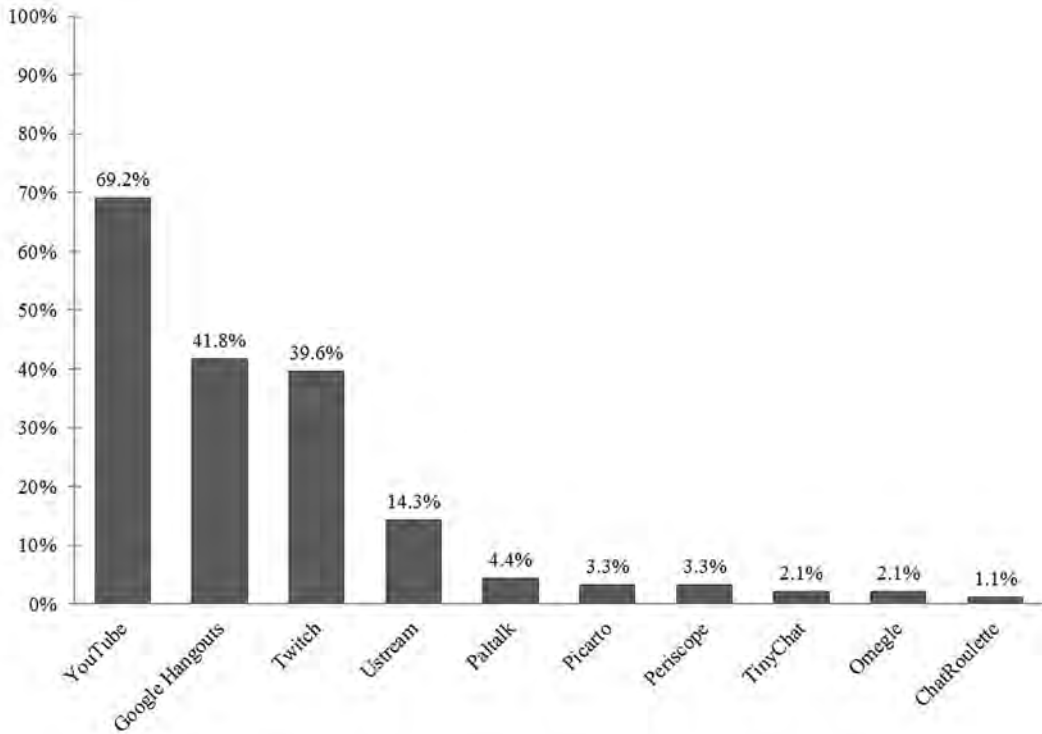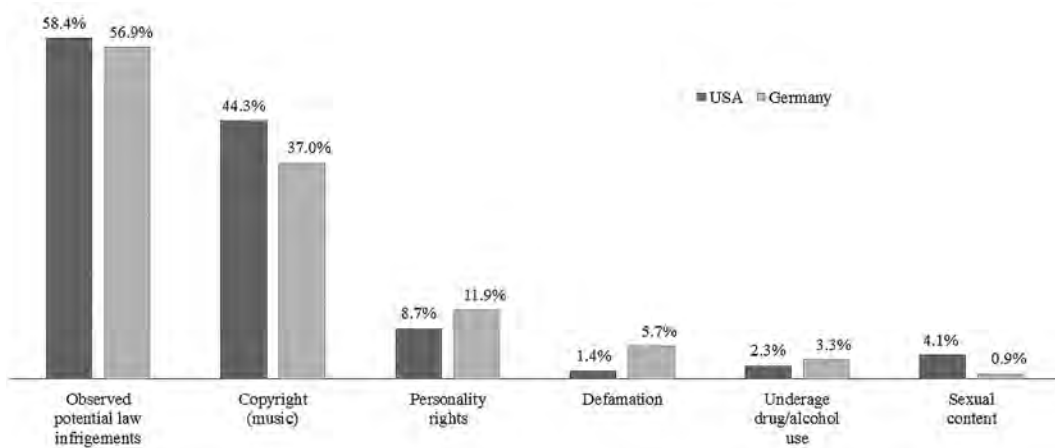

Figure 13. Observed potential law infringements: Germany vs. U.S.A. (N = 434 streams) (Honka et al., 2015)

observed in 5.7% of German and 1.4% of U.S. streams. Regarding the youth protection, two aspects were elaborated—the underage use of alcohol or drugs, and sexual content (revealing appearance of the streamer, or pressuring requests from the viewers to the streamer to undress etc.). Total 3.3% of German and 2.3% of U.S. streams included underage drinking or drug use, whereas 0.9% of German and 4.1% of U.S. streams had sexual content.

CORRELATIONS

Finally, we are going to present correlation values (Pearson) between the indicators of information services (ease of use, usefulness, trust, and fun), the information acceptance indicators use and leisure time as well as the user-specific indicator of flow (Table 1).

The use correlates positively with all other indicators, especially high with usefulness (+0.50), fun (+0.57) and – as the highest correlation in our study – leisure time (+0.89). The more a user applies YouNow the more he or she perceives YouNow as useful and funny. The more he or she applies the service the more there is an impact on his or her leisure time. Despite of flow, fun is highly correlated (+0.50 or higher) with all other indicators. The experience of flow correlates highly with the influence on leisure time and with use. That is not very surprising: if a user is in the state of flow he forgets his time and environment and therefore there are great influences of his or her leisure time.

CONCLUSION

What are the results from the evaluation of the social live streaming service YouNow? The online service is mostly used by teenagers aged 13 to 22 who want to have fun (64.7% having fun). For the majority (82.8%) the system is easy to use and more than half even thinks it is useful. YouNow users like to watch streams, to chat while watching, and to reward performers by using emoticons. 45% of the participants like to stream actively as well. Besides the fact that this system is easily applicable, main motives are the satisfaction of the need of self-presentation, followed by boredom and the intended acceptance by the community.

For many YouNow users, gamification elements like virtual presents or levels are important motivational factors. Some users even report about experiences of flow while using this service. Highly recommended streams are streams from friends, streams from famous YouTubers, streams from people with the same age or same interests and streams from people, who are aged between 16 and 20. Most users do prepare for their live streams. They check their equipment, inform their friends or style themselves. They also link to other social media platforms like Facebook, Twitter, Instagram and YouTube and few of them have even experiences with other live streaming platforms, namely Google Hangouts, Twitch or Ustream. About half of the users would quit using YouNow when the usage becomes boring or YouNow would abuse their personal data. And only around two-third of them would recommend the usage of the service. Negative aspects seem to be the influence on the users' leisure time and the possible law infringements. More than 40% of the participants report on high influence on their leisure time since they use YouNow. In more than 50% of all streams potential law infringements have been observed.

Table 1. Correlations between information services indicators, use, flow and leisure time

	Use	Ease of use	Usefulness	Trust	Fun	Flow	Leisure time
Use	1						
Ease of use	+0.36	1					
Usefulness	+0.50	+0.47	1				
Trust	+0.46	+0.33	+0.64	1			
Fun	+0.57	+0.50	+0.69	+0.57	1		
Flow	+0.46	+0.26	+0.30	+0.34	+0.35	1	
Leisure time	+0.89	+0.31	+0.48	+0.46	+0.56	+0.50	1

There are some limitations of the empirical study. The number of respondents of the online survey is rather small (123 respondents completed the survey). The results of the investigation would be more accurate and would better represent the whole population if there was a higher number of participants. Furthermore, most of the survey participants were from Germany, the United States and the United Kingdom, and none from Turkey, Saudi Arabia or Mexico, where a high number of site visitors come from. Also, the legal aspects of live streaming should be analyzed in more detail. Are there indeed consequences for law infringements (e.g., after defamation or violation of personality rights)? Is the use of music really a violation of copyright or is it, especially in the United States, subject to fair use?

Finally, YouNow is an easy applicable option for teenagers or young adults, who are bored, want to have fun with friends and want to meet new people. To get a better understanding of social live streaming services, there is need for further investigations of other live streaming platforms as well as more extensive ones about YouNow itself.

All in all, social live streaming services such as YouNow are a new facet of synchronous social media. Indeed, there is more collaboration among users; however, we were not able to detect more "collective intelligence" (Lucas de Azevedo & Borges, 2015). Social live streaming services allow for self-presentation and satisfaction of the need to belong to a community (Nadkarni & Hofmann, 2012) for both, the broadcasters as well as their audience. Their main social assets seem to be entertainment and to relieve their users' boredom.

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Figure 14. The research team

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